

Application No. 09/699,224  
Reply dated July 28, 2005  
Response to Office Communication of January 28, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in this application.

**Listing of Claims:**

Claim 1 (currently amended): An isolated peptide mimic of a conserved gonococcal lipooligosaccharide (LOS) epitope not found on human blood group antigens, wherein said peptide mimic is capable of inducing in a mammal an immune response against said conserved gonococcal lipooligosaccharide (LOS) epitope and wherein said peptide mimic is less than 50 amino acids in length.

Claim 2 (currently amended): The peptide mimic according to claim 1, wherein the amino acid sequence of the peptide mimic comprises the sequence peptide mimic comprises the amino acid sequence of SEQ ID NO:8.

Claim 3 (original): The peptide mimic according to claim 1, wherein the immune response is T-cell dependent.

Claim 4 (original): The peptide mimic according to claim 1 or 2, wherein the amino acid sequence of the peptide mimic comprises cysteine residues at each terminus.

Claim 5 (currently amended): The peptide mimic according to claim 4, wherein a cyclic peptide is formed through disulfide bridges between the cysteine residues at each terminus of said amino acid sequence.

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Claim 6 (previously amended): The peptide mimic according to claim 5, wherein the peptide mimic is coupled to a second agent.

Claim 7 (original): The peptide mimic according to claim 6, wherein the second agent is an adjuvant.

Claim 8 (original): The peptide mimic according to claim 1 or 2, wherein the peptide mimic further comprises an adjuvant or a carrier protein.

Claim 9 (previously presented): The peptide mimic according to claim 1 or 2, wherein the peptide mimic is part of a multiple-antigen peptide (MAP).

Claim 10 (original): The peptide mimic according to claim 1 or 2, wherein said peptide mimic competes with gonococcal lipooligosaccharide (LOS) for binding to monoclonal antibody 2C7.

Claim 11: Cancelled.

Claim 12 (currently amended): The peptide mimic according to claim 1, wherein the peptide mimic immunospecifically binds to monoclonal antibody 2C7.

Claim 13 (currently amended): The peptide mimic according to claim 1, wherein the peptide mimic immunospecifically binds to a monoclonal antibody produced by immunizing a mammal with an anti-idiotypic monoclonal antibody, or antigen-binding fragment thereof, produced by a

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hybridoma cell line having the specific immunological reactivity of monoclonal antibodies produced by hybridoma cell line HB 11311 as deposited with the ATCC.

Claim 14: Cancelled.

Claim 15 (previously presented): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic according to any one of claims 1-3, 5-7, 9, 12 or 13.

Claim 16 (currently amended): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic comprising the amino acid peptide sequence of SEQ ID NO:1.

Claim 17 (withdrawn): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic comprising the peptide sequence of SEQ ID NO:2.

Claim 18 (withdrawn): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic comprising the peptide sequence of SEQ ID NO:3.

Claim 19 (withdrawn): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic comprising the peptide sequence of SEQ ID NO:4.

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Claim 20 (withdrawn): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic comprising the peptide sequence of SEQ ID NO:5.

Claim 21 (withdrawn): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic comprising the peptide sequence of SEQ ID NO:6.

Claim 22 (withdrawn): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic comprising the peptide sequence of SEQ ID NO:7.

Claim 23 (withdrawn): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic comprising the peptide sequence of SEQ ID NO:10.

Claim 24 (withdrawn): A method for immunizing a mammal against *N. gonorrhoeae* infection comprising the step of administering to said mammal an immunoprophylactically effective amount of a peptide mimic according to any one of claims 1-3 and a pharmaceutically acceptable carrier.

Claim 25 (withdrawn): A method for immunizing a mammal against *N. gonorrhoeae* infection comprising the step of administering to said mammal an immunoprophylactically effective

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amount of a peptide mimic according to any one of claims 11-14 and a pharmaceutically acceptable carrier.

Claim 26 (withdrawn): The peptide mimic according to claim 1 or 11, wherein the peptide mimic is coupled to a complement protein.

Claim 27 (withdrawn): The peptide mimic according to claim 26, wherein the peptide mimic is coupled to complement protein C3d.

Claim 28 (withdrawn): A method for immunizing a mammal against *N. gonorrhoeae* infection comprising the step of administering to said mammal an immunoprophylactically effective amount of a peptide mimic according to claim 27 and a pharmaceutically acceptable carrier.

Claim 29 (withdrawn): A composition for immunizing against *N. gonorrhoeae* infection comprising an immunoprophylactically effective amount of a peptide mimic according to claim 27.

Claim 30 (withdrawn): A method for increasing the antigenicity of a peptide mimic according to claim 1 or 11 comprising the step of coupling said peptide mimic to a complement protein.

Claim 31 (withdrawn): The method according to claim 30, wherein the complement protein is C3d.